

Title (en)

Gas turbine engine fan blade retention

Title (de)

Befestigung von Bläuserschaufeln bei einem Gasturbinentriebwerk

Title (fr)

Fixation des aubes de soufflante pour un turboréacteur

Publication

EP 0821133 A1 19980128 (EN)

Application

EP 97304463 A 19970625

Priority

GB 9615826 A 19960727

Abstract (en)

A fan for a gas turbine engine comprises a rotary disc carrying an annular array of radially extending fan blades. Each fan blade has a root portion which is radially constrained within a generally axially extending groove formed within a disc rim. The blade root comprises two portions each radially convergent toward one another with respect to the axis of rotation of the disc. The groove within the disc also comprises two base portions each being correspondingly radially convergent toward one another. Axial retention of the blade root within the groove is achieved by the centrifugal component of the blade load acting in an opposite direction to any applied axial load in the forward or rearward direction. <IMAGE>

IPC 1-7

F01D 5/30

IPC 8 full level

F01D 5/30 (2006.01)

CPC (source: EP US)

F01D 5/30 (2013.01 - EP US); **F01D 5/3007** (2013.01 - EP US); **F01D 5/323** (2013.01 - EP); **F01D 5/326** (2013.01 - US)

Citation (search report)

- [XA] DE 4108930 A1 19911002 - GEN ELECTRIC [US]
- [Y] US 3378230 A 19680416 - TOOMEY MYRON D
- [A] EP 0475878 A1 19920318 - PRATT & WHITNEY CANADA [CA]
- [A] EP 0475879 A1 19920318 - PRATT & WHITNEY CANADA [CA]
- [A] FR 976790 A 19510322
- [A] US 2781962 A 19570219 - WILDER JR STUART
- [A] GB 2021700 A 19791205 - ROLLS ROYCE
- [Y] PATENT ABSTRACTS OF JAPAN vol. 007, no. 068 (M - 201) 19 March 1983 (1983-03-19)
- [A] PATENT ABSTRACTS OF JAPAN vol. 010, no. 010 (M - 446) 16 January 1986 (1986-01-16)
- [A] PATENT ABSTRACTS OF JAPAN vol. 008, no. 227 (M - 332) 18 October 1984 (1984-10-18)

Cited by

EP2112328A1; US6155788A; EP0971096A3; FR3034130A1; EP0971096A2

Designated contracting state (EPC)

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

EP 0821133 A1 19980128; EP 0821133 B1 20020911; DE 69715331 D1 20021017; DE 69715331 T2 20030102; GB 9615826 D0 19960911; US 5913660 A 19990622

DOCDB simple family (application)

EP 97304463 A 19970625; DE 69715331 T 19970625; GB 9615826 A 19960727; US 88646297 A 19970701